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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
WALLS, DIONNE A

ART UNIT	PAPER NUMBER
1731	8

DATE MAILED: 11/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/664,533	Applicant(s) STATON ET AL.	
	Examiner Dionne A. Walls	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 August 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 27, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al (US. Pat. No. 6,146,262) in view of Long (US. Pat. No. 5,328,403), hereinafter referred to as Long '403.

Long et al discloses a method for subjecting meat (corresponding to the claimed material") immersed in water to explosive/shock wave treatment. The meat can be treated in a stainless steel, generally hemispheric ally shaped vessel or tank which includes a shock-reflective wall, such that when an explosion occurs at the center of the tank, a shock wave travels outward and shock pulses rebound from the tank wall, and passes back though the meat (corresponding to the claimed "material is subjected to a portion of the explosive forces reflecting off of an interior surface of the lower portion of the vessel"). The meat is, thereafter, obviously removed from the vessel for further processing and/or packaging for consumer use (see cols. 1 – 4). While Long et al may not specifically state that the vessel has a length in a first direction which is greater than the width in the second direction, Long et al does state that better results can be achieved by varying the shape of the tank (see col. 3, lines 52-59). Further, Long '403

discloses a tank for subjecting meat to explosion wherein said tank can have an elongated shape (see col. 7, lines 53-54). The Examiner interprets this to comprise a vessel having a length greater than its width, i.e. "elongated". Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the tank in Long et al with a tank having an elongated shape (which would be generally semi-cylindrical in shape) since this shape is envisioned for the tenderizing of meat in the Long '403 patent.

Regarding claims 30-31, Long et al discloses that tenderizing meat in the manner disclosed has many advantages, including the killing of bacteria (see col. 1, lines 37-39). Therefore, a "material" treated in the water, in *addition* to meat, would have obviously been an impurity/bacteria/pathogen found on/in the meat, as disclosed in the reference - which satisfies the above claims.

3. Claims 2-15, and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al (US. Pat. No. 6,146,262) in view of Long '403 (US. Pat. No. 5,328,403), as applied to claim 1 above, and further in view of Godfrey (US. Pat. No. 3,492,688).

Regarding claim 2, while Long et al modified by Long '403 may not disclose a vessel-top being removably positionable above the vessel-bottom, Long et al does state that during the explosive process, water is blown upwardly (col.4, lines 20-21). Further, Godfrey discloses a process for tenderizing meat wherein the meat, immersed in water, is subjected to explosive forces within a container which comprises a top (see figs.) Therefore, it would have been obvious to one having ordinary skill in the art at the time

of the invention to include a top over the vessel/tank of Long et al modified by Long in order to prevent the water in the vessel from spewing out during the explosive process and soiling the area around the tank.

Regarding claims 3 and 4, the vessel of Long et al modified by Long '403 and Godfrey, may have a planar surface extending parallel to the first and second directions, since Long et al teaches that the vessel of its invention can be configured to have a "flattened bottom" or "flat surfaces" (See col. 3, line 58). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to flatten the bottom on the semi-cylindrical surface of the apparatus of the combined references (which would obviously result in planar surfaces parallel to the first and second directions) since Long et al states that doing so will achieve better results in the tenderizing of meat subjected to the disclosed process.

Regarding claim 5, while Long et al modified by Long '403 and Godfrey may not specifically state that the interior surface of the vessel-bottom has a planar side surface extending parallel to the first direction, and a sloped at an angle of between 0 and 90 degrees relative to the second direction, Long et al does state that the shape of the vessel can be varied, and such variation can include providing a number of faceted flat surfaces along the hemispherical wall. One having ordinary skill in the art could interpret this to include sloped surfaces faceted around the bottom of the vessel, arranged in a manner to optimize the tenderization process in order to achieve the best results.

Regarding claim 6, the vessel of Long et al modified by Long '403 and Godfrey would be semi-cylindrical in shape (see paragraph 2, above).

Claims 7-8, the apparatus of Long et al modified by Long '403 and Godfrey would have been connected to a foundation (see fig. 1). However, while it may not specifically also show reversibly locking the vessel-top to a connector/foundation with a locking mechanism having the attributes claimed, one having ordinary skill in the art would have fabricated such means and associated it with the tenderizing vessel of Long et al modified by Long '403 and Godfrey in order to ensure that tank top was properly positioned and locked on the vessel top so that during the detonation of the explosive, the top would not separate from the vessel resulting in a spewing of water from the tank and further spoiling the surrounding tank area.

Regarding claims 9-11, the tank of Long et al modified by Long '403 and Godfrey, as disclosed in Long et al figs, would have had a vessel connected to a foundation and a lower/upper mounting spring 60, having a flange 56 between upper and lower portions of the spring for resilient/rigid connection to a foundation (see figs).

Regarding claim 12, while the vessel-top of Long et al modified by Long '403 and Godfrey may not articulate a venting hole, this limitation does not patentably distinguish the claims over the prior art since vents, to allow air to escape confined areas, are well known in many arts; therefore, one having ordinary skill in the art would have provided for air venting in order to prevent the build-up of any pressure/gas/energy that may result from an explosion in such a confined vessel.

Regarding claims 13-14, a movable end having the claimed features is merely one of many obvious means by which meat, and the water in which it is immersed, subjected to tenderization can be removed. Therefore, the claimed limitations regarding

this moveable end will not impart patentable distinction since one having ordinary skill in the art would have arrived as such a means by which to remove the meat since sliding/moveable doors are conventional means for removing articles in many arts.

Regarding claim 15, Long et al teaches that explosive forces can be caused by subjecting the meat to an explosive charge in the liquid (see col. 1, lines 30-35).

Regarding claims 19-24, While the combined references may not disclose sequentially positioning the vessel top over each of a plurality of vessel-bottoms, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate these steps for economic reasons, i.e. in order to save money from having to produce more than one vessel top for batch operations.

4. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al(US. Pat. No. 6,146,262) in view of Long '403 (US. Pat. No. 5,328,403), and further in view of Long (US. Pat. No. 6,168,814), hereinafter referred to as Long '814.

Regarding claims 16-17, while the apparatus of the combined references may not state that the explosive forces are caused by discharging a capacitor through a capacitor discharge electrode located in the vessel, via a capacitor discharge machine attached to the electrode, Long '814 discloses that meat can be tenderized from explosions caused by capacitative discharge between electrodes (col. 1, lines 23-26). It follows that this capacitative discharge is supplied by a machine attached to the electrode. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize this manner to detonate explosive to subject the meat to the tenderization process, since this means is known in the art.

Regarding claims 18, while the combined references may not teach that the vessel for tenderizing meat is a pipe, Long et al does teach varying the shape of the vessel in order to effectuate better meat tenderization. Also, Long '403 teaches that an elongated shape can be utilized in the meat tenderization process. Further Long '814 discloses a pipe vessel in which to tenderize meat. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to substitute the apparatus of Long et al in view of Long '403 with a pipe apparatus for which to tenderize meat, since these vessels are known in the art as evidenced by the Long '814 reference, in order to attain improved batch processing (col. 3, lines 62-66).

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al(US. Pat. No. 6,146,262) in view of Long '404 (US. Pat. No. 5,328,403) and Godfrey (US. Pat. No. 3,492,688), and further in view of Zernow et al (US. Pat. No. 3,228,221).

While the references may not teach that the material subjected to explosive treatment is metal, Long et al does state that its disclosed method is applicable not only to the treatment of meat, but to any other product or substance which can benefit form shock-wave treatment. Also, Zernow teaches that metal is often subjected to shock waves, while immersed in water, in order to form various shapes (see col. 1, lines 13-22). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize the process described in Long et al modified by Long '403 and Godfrey since subjecting metal to shock treatment is known in the art as evidenced by the Zernow et al reference.

Allowable Subject Matter

6. Claims 25-26 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne A. Walls whose telephone number is (703) 305-0933. The examiner can normally be reached on Mon-Fri, 7AM - 4:30PM (Every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

Dionne A. Walls
November 17, 2002

STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
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